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ABSTRACT

This paper examines Howard University's Center for Academic Reinforcement (CAR), which provides college compensatory education to underprepared students. Research findings from CAR and the academic and non-academic factors related to students' successful completion of the program are discussed. The research findings reported include: (1) the degree to which Scholastic Aptitude Tests predict performance in CAR; (2) the role of class attendance and learning laboratories; (3) the relationship between self-concept and academic achievement of the CAR student; and (4) the value of special summer program. The paper concludes with a general evaluation of the program, and points to some of the lessons to be learned from the program. (APM)

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Factors Associated With Successful Completion of A College Compensatory Program or Program Evaluaton May Lead to "Bad" News

Institutions of higher education have become sensitive and responsive to the decline in public education standards, and it has become rare to find a college or university in the United States without some type of compensatory program (developmental, remedial, or transitional studies) for its underprepared student population. The literature on college compensatory programs (CCPs) has become massive; however, the overall quality of the literature is questionable, often confusing, and frequently contradictory (Tinto, 1974; Gordon, 1976; and Dudley, 1978). Gordon (1976:10) stated in a review of the literature on CCPs that ". . . collegiate compensatory programs have failed to document the design as well as the implementation." Adolphus (1977:4) suggests that one explanation for the unfavorable results of compensatory education at institutions of higher education is that "nobody's quite sure how to practice it (that is, compensatory education)." After nearly six years of operation, Howard University's Center for Academic Reinforcement (CAR) is in a some what better predicament. Even though the Center is unable to claim categorically that its program and practices are entirely productive, the Center, however, has become increasingly knowledgeable and cognizant, through its research and evaluation efforts, of what works, what doesn't work, and why.

CAR, now entering its sixth year at Howard University, has served more than 3,000 first-time-in-college freshmen (FTIC's) in its primary program of studies - high intensity, compressed time, transitional courses in mathematics, study skills and verbal studies for freshmen who have been admitted conditionally by one of the ten undergraduate schools and colleges. In addition to its primary program of studies, the CAR has developed and implemented collateral services for approximately 1500 University secretarial staff members, upperclassmen, graduate students, and occassionally for faculty members through providing free mini-courses. The mini-courses are spin-offs from the regular CAR courses, and are inherently concerned with meaningful developmental reviews of basic mathematics, English composition, and study skills.

This brief article will focus upon CAR research findings relating to its state purposes and objectives which reflect the strengths and weaknesses, successes and failures of the CAR program-in-operation. Specifically, this article will discuss the academic and non-academic factors related to the CAR students' successful completion of the CAR program; and finally, this article will attempt to answer the question, "Is the CAR program a success of failure?"

Test Scores

M. J. Sherman stated in Change (October, 1977:21) that, "There is no tidy way to predict academic success." Yet, determining why some students succeed and others fail is important and necessary. Each year more than three million high school seniors take the Scholastic Aptitude Test (SAT), and a little more

than 40 percent of the students who are administered the SAT-Verbal have scores ranging from 200 to 399. Typically, nearly 65 percent of the CAR students who have taken the SAT-Verbal have scores ranging from 200 to 399. National performance on the SAT-Mathematics reveals a similar trend -- about 40 percent of the students tested each year have scores ranging from 200 to 399. CAR students' performance on the SAT-M is much better than their performance on the SAT-V. Typically, a little more than 50 percent of the CAR students who have taken the SAT-M have scores ranging from 200 to 399.

A great deal of conflicting evidence exists concerning the SATs and minorities. William Boyd (1976) suggests that, at best, SAT scores underpredict the success of minorities at institutions of higher education. An unpublished study developed by Mary L. Hunt (1975) for the College of Liberal Arts (CLA) at Howard University found that students enrolled in CLA, who scored below 350 on SAT-V probably would not complete their studies at the college. If they did remain, they would probably find themselves in poor academic standing.

During the last three years, CAR research has found statistical evidence that the SAT can be used as a probable measure for predicting success of lack of success in Verbal reinforcement (CAR-V) or Mathematical reinforcement (CAR-M). For example, the schools/colleges with the lowest SAT-V means had the highest percentages of students failing CAR-V. The same is true for SAT-M scores; the schools/colleges with the lowest SAT-M means had the highest percentages of students failing CAR-M.

The same trend continues with individuals. It appears that the lower the student's SAT scores the greater are his/her chances of failure. For example, students whose SAT-V was above 300 passed CAR-V more often than students whose SAT-V score was below 300. During the fall 1976 semester, 71 percent of the students whose SAT-V scores were above 300 passed CAR-V while 47 percent of the students whose SAT-V scores were below 300 passed CAR-V. (There is a significant difference between the proportions beyond the .01 level of confidence.)

During the first three years of operation, the CAR administered the McGraw-Hill Basic Skills System (MHBSS) to more than 1,000 FTIC's. The MHBSS is a diagnostic test battery which screens the students' abilities in mathematics, writing, reading, and study skills. An analysis of this test data is incomplete at this writing, however, preliminary findings seem to corroborate the findings of the CAR Grading-SAT scores research, discussed previously. For example, students with extremely low mathematics scores rarely complete CAR-M in one semester, while students with average mathematics scores seem to be able to complete CAR-M in one semester. Students with extremely low reading comprehension scores have a great deal of difficulty completing CAR-V in one semester, while CAR students with average reading comprehension skills seem to able to complete CAR-V satisfactorily in one semester.

It seems apparent that there are different degrees of underpreparedness among the CAR student population. The underprepared student whose SAT scores are

above 300 will more than likely satisfactorily complete the CAR studies. It is also apparent that the underprepared students whose SAT scores are below 300 will experience a great deal of difficulty completing the CAR studies and will more than likely need more than one semester of academic reinforcement. If, Howard University therefore, is committed to accepting the extremely underprepared student, then it must realize that academic reinforcement for this student may take as long as two years.

Class Attendance and Learning Laboratories

The development of basic skills cannot occur if the student is not present. Of course, physical presence does not insure the development of basic skills, but frequent absences will deter appreciable growth and development. Results of the analysis of attendance records of CAR students in CAR courses supports the premise that development, growth, and success in the CAR program results only when the student is continuously present in the classroom.

The dominant foci of the instructional programs in mathematics, verbal and study skills components are two laboratories. The verbal/study skills and mathematics laboratories are fully equipped with machines, devices, and delivery systems that are audio, visual, and audio-visual for individual and group learning. The laboratories contribute to the development of the major thrust in the CAR -- increased student responsibility for independence in learning. Students enrolled in the CAR program must spend time in these learning laboratories. Tentative evidence presently available seems to suggest that there is a very strong relationship between success in CAR-V and

CAR-Learning/Study Skills (CAR-L) and the amount of time spent in CAR laboratory activities. In other words, the more time the student spends in the CAR laboratory, independently reinforcing the directed class studies, the better are his/her chances of successful completion of the CAR program.

Self-Concepts

A careful analysis of the literature on self-concepts and academic achievement suggests overwhelming support for the thesis that self-concept and academic achievement are positively correlated (Brookover, 1965; Sprull, 1969; Olsen, 1972; and Dean, 1977). It is not exactly clear what the relationship is between self-concept and academic achievement of the CAR student. In fact, research results reported thus far seem to be somewhat contradictory.

CAR reported in its 1976-1977 Annual Report that:

> "According to the American Council on Education (ACE) survey (Puryear, 1977), which is derived from the ACE Student Information Form, the CAR students have lower high school GPA's, feel less well prepared in various subject areas, have less confidence in their academic and intellectual abilities, and have less drive to achieve than do the non-CAR freshmen students."

Puryear's conclusion that the CAR students' perception of himself and his academic/achievement ability was lower than the average Howard University freshman is well documented. However, other research results (Hawkins, 1976) reported seem to contradict Puryear's findings. For example, during the 1976 semester when asked to anticipate their first semester grade point average, nearly 70 percent of the CAR students indicated that their first semester's GPA would be well above a C+. The total anticipated mean for all CAR students was 2.96.

Typically, most CAR students come from large (500+) high schools, and surprisingly most CAR students, roughly 60 to 70 percent, rank in the upper 40 percent of their graduating class. Nearly 40 percent of the fall 1976 CAR student population were ranked in the upper 20 percent of their graduating high school class. This important characteristic of the CAR student population also seems contradictory to Puryear's characterization of the CAR student.

There appears to be conflicting evidence concerning the CAR student and his perception of himself. Currently the CAR is looking at the self-concept of each CAR student as measured by the Tennessee Self-Concept Scale and the Brookover Self-Concept of Academic Ability; however, analysis of this data is incomplete at this writing. But it seems possible to suggest that the self-concept of the underprepared student will not be as low as has been suggested and documented by research efforts in the past.

The Special Summer Program

Suchman (1967:67) claims that in order to determine how and why a program works or does not work, one must evaluate the "conditions under which the program is more or less successful: local, timing, auspices, and so on." Each year prospective CAR students are invited to complete the CAR studies during a special six-week session. During summer 1976 and 1977, about 80 FTIC's participated in the CAR summer program (CARSP). Research to date seems to suggest that significantly more students successfully complete the CAR studies during the CARSP than during the regular academic school year. For

example, during the CARSP 1976, more than sixty percent of the students enrolled in the CAR-M received "Satisfactory" grades; however, during the fall semester 1976 only 13 percent of the students enrolled in CAR-M received "Satisfactory" grades.

Why is the CARSP apparently more successful than the regular CAR program which operates during the regular academic school year? Obviously, the conditions for success are much better during the summer than they are during the fall or spring semesters. During the CARSP student enrollment is small, and CAR instructors are able to give more individual attention to students' needs. The CAR student, who participates in the CARSP, is also isolated from distractions which are present during the regular academic school year. The CAR student's time is not divided between academic reinforcement and participation in regular University courses. Based on the positive results of the past CARSP, prospective CAR students should be encourage to complete the CAR studies during the summer. This option, however, takes a financial committment which most CAR students are probably not able to make. Perhaps the University will make it economically feasible, through various forms of financial aid, for greater numbers of prospective CAR students to attend the CARSP.

THE CAR PROGRAM: A SUCCESS OR FAILURE?

Suchman (1967) suggests that five categories of criteria be used for evaluating the success or failure of a program. In this short article, it is

impossible to relate and discuss each of these categories of criteria to the CAR program. It is possible, however, to answer the more important research questions which commonly confront college compensatory programs in the United States. The discussion that follows, therefore, will address the question, "Is the CAR program a success or failure?"

Does exposure to the CAR program increase the underprepared student's proficiency in the basic skills? Testing, especially pre- and post-testing, is extremely important for CCPs, mainly because test results can be used to measure the amount of growth and development that has taken place within the underprepared student population. Analyses of the test performance of students who participate in the CAR program reveals that significant growth occurred on standardized tests of achievement. For example, Puryear (1975) found in t-test analyses of difference between pre- and post-test means on the McGraw-Hill Basic Skills System (MHBSS) that CAR students improve significantly in five of the six skills areas measured. Joice (1976) found that the 1975 CAR group increased achievement test (MHBSS) performance over the 1974 CAR group, and that the CAR program generally increased the test performance levels of about 40 percent of its students. It has also been documented that students who satisfactorily complete the CAR studies demonstrate greater growth on standardized tests of achievement than CAR students who fail to complete the CAR studies. For example, students who received "satisfactory" grades in CAR-M scores significantly higher on the post-test of Mathematics (MHBSS) than students who received grades of "Unsatisfactory" or "Incomplete/Unsatisfactory."

After exposure to the CAR program, how does the underprepared student perform academically? The answer to this question is extremely complicated, mainly because it can be answered in so many different ways. CAR verbal reinforcement should increase the underprepared student's chances for success in such other verbal studies as English 002 and English 003. When the English grades of CAR students were analyzed in 1978, the results revealed that the majority of CAR students who had passed CAR-V also passed English 002 and English 003. The majority of the grades, however, received by these students were "Cs".

CAR mathematical reinforcement, like CAR-V, should increase the underprepared student's chances for success in other mathematical studies; however, when the mathematics grades of a selected group of CAR students were analyzed in 1976, the results revealed that mathematical reinforcement does not mean guaranteed success in upper level mathematics courses. This conclusion seems to be supported by the fact that the majority of the CAR students who did enroll in upper level mathematics courses received either "Ds" or "Fs" in those courses.

The College Research Service at Howard University has found that the progress of CAR students in the College of Liberal Arts is favorable. Hunt (1976:11) stated in a report that:

> "Overall, there is the impression that CAR students are moving along more slowly, but meeting the minimum standards of performance about as well in what they do as students who do not, or are not required to participate in the program. In terms of GPA, however, CAR student perform more poorly."

CAR research efforts seem to support Hunt's findings. Sixty-four percent of the original CAR group, 232 students, survived two years at Howard University. The average or mean grade point average for the remaining students was 2.24 (on a scale of 0-4). Approximately 20 percent of the students had a GPA above 3.00, while 25 percent had a GPA below 2.00.

After four years at Howard University academic records revealed that approximately 100 students, or 43 percent of the original 1974 CAR group were still enrolled at Howard University. However, only 16 percent, or 31 out of the original 232, graduated from Howard University after four years. One very interesting fact stands out about the CAR student who graduated and their participation in the CAR program, that is, nearly all of them satisfactorily completed the CAR requirement in one semester.

The "Bad" News

Over the last five to six years selected aspects of the CAR program have been studied thoroughly, and the research generated to date enables CAR administrators to answer the question, "Is the CAR program a success or failure?" Determining the answer to this question is not easy; however, failing to answer the question would be dishonest. The data certainly seem to suggest that Howard University has failed the majority of its CAR students. It is important to emphasize that there is a major distinction between students who fail, and colleges and universities that fail its students. At Howard the latter situation is evident. Consider some additional facts:

1. During the first semester (1977-78 school year) approximately 110 students identified for the CAR program were placed on academic

probation. School officials did nothing in the way of providing additional academic support for these students.

2. During the fall 1977 nearly eighty (80) FTICs who had been identified by the Office of Admissions for participation in the CAR program, failed to participate in the CAR program. The mean grade point average of these students was 1.61. School officials did nothing to impress upon these students that they had to participate in the CAR program.
3. During the first two years of operation, only 1 out of 4 CAR students who failed a CAR course returned to CAR and attempted to earn a satisfactory grade in he course failed. School officials did nothing to encourage students to make-up uncompleted CAR course work.

These facts seem to echo a comment made by Roueche (1978:6) concerning the success of college compensatory programs. Roueche stated that: ". . . you (the institution of higher education) are probably better off not to invite people to your party than to have them come to the party and then shoot half of them." Objectively, it does appear that Howard University is admitting substantial numbers of "risk" students, yet, failing to insure that the "risk" student complete the CAR program requirements. The "risk" students failure to complete the CAR program does seem to be related to the consequent failure of "risk" students in the regular University curriculum.

When the same door that swung wide-open for the underprepared student begins to revolve, who is to blame, the student or the institution of higher education? It is a fairly easy out for the institution to blame the student;

after all who really expected miracles from students whose composite SAT scores ranged between 400 to 600. But, casting blame is no easy process, in fact, it is my belief that the student should be given the benefit of the doubt, and that the burden of blame should rest squarely on the institution's shoulders. This belief does not mean that the underprepared student has no responsibilities, no stake in his reeducation. This belief, instead, says that the institution of higher learning must have designed a program so nearly failure-proof that the only way the underprepared student can get back out of the door is by removing the hinges. Howard University's CAR program is a failure, not simply be cause the majority of its students have failed, but because Howard University has failed its students.

FINAL THOUGHTS

When Howard University instituted its CAR program in 1974 it wisely designed into the program a mechanism for program evaluation. Over the last five years the CAR program has become increasingly knowledgeable and cognizant, through its research and evaluation efforts, of what works, what doesn't work, and why. This paper has discussed factors related to successful completion of the CAR program, a college compensatory program. It is important to note that the majority of the literature on college compensatory programs concentrates on what happens to the student after the compensatory program. This research is valuable; however, more research must be focused on factors relating to successful completion of compensatory programs. This type of research will do much to assist program developers in avoiding wasteful programming efforts.

If we know that intense summer remediation programs work, especially when these programs isolate the remedial student from the regular college curriculum, then more should be done to encourage the development of these programs. If we know that classroom instruction aided by learning laboratory reinforcement works better than classroom instruction without the assistance of lab reinforcement, then more should be done to encourage the development of learning laboratories. The bottom line here is that more research must be aimed at refining the college compensatory program that "works."

But there is also another lesson to be learned from the CAR program at Howard University, and that is, good research and evaluation may lead program administrators to the conclusion that while some students succeed, and we know why they succeed, the majority fail. But those who fail, fail mostly because the institution has failed them. If anything the CAR program at Howard University has learned through its empirical research that educating the educationally disadvantaged is a campus-wide responsibility.

College compensatory program cannot exist in a vacuum. The problem at Howard University is that the administration has failed to act, failed to take advantage of the advantage it created by giving CAR the mechanism for evaluating itself. It has failed mostly in the sense that it has not taken useful research findings and created helpful campus-wide policies that would stop the University's doors from revolving at a very dizzy pace. A wise researcher once said about the frustrations associated with doing research, "The road to inaction is paved with research reports."

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